

India is thus bridged over by these records, and it now remains to find out how far it extends northward into the United Provinces. There were no specimens of it in the Lucknow Museum, when I examined the snakes there in December 1908.

My specimen, which is deposited in the Nagpur Museum, is a typical one, except that the scale rows reduce to 13 at about 3 inches before the middle of the body. The ventrals are 193 and the sub-caudals in 126 pairs.

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### No. XIII.—NOTES ON THE RUSSELL'S VIPER.

(With a Plate.)

The following notes relate to the young ones which a Russell's viper produced in the Central College Museum. An adult female specimen, measuring about 4 feet, was obtained locally towards the first week of December 1916, and on the 8th June 1917, the young ones were born. Assuming that fertilisation took place in November,—there is no other evidence for this assumption than the testimony of the snake charmers who are unreliable in such matters—the period of gestation has occupied in this case roughly seven months.<sup>1</sup> Of the six young *daboiæ* that were produced, three were still-born, and in addition three eggs were deposited. Except in one egg, no trace of development could be made out in others and it is doubtful whether these latter were impregnated at all.<sup>2</sup> The eggs are translucent, reddish and are soft; the leathery shell of the eggs belonging to the *Elapinae* group is replaced by a soft membrane. They are held together by a gelatinous twisted cord which may be of immense length sometimes and which hardens on exposure. Each egg measures 30 mm. along the longer axis.

The young ones moult soon after rupturing the vitelline membrane. The following are the measurements of the largest specimen:—

Total length	.. .. .	225 mm.
Round the thickest part	.. .. .	38 mm.
Tail	.. .. .	30 mm.
Fang along the outer curve	.. .. .	5 mm.

The parent exhibits little concern about her offspring and interference with them extorted from her nothing more savage than a prolonged hiss. In the newly-born male specimens, the copulatory sacs are external and are four caecal outgrowths.<sup>3</sup> The colouration of the young ones differ from the adults in certain particulars and the more interesting of them refer to a large diamond-shaped mark on the head, edged with white. A conspicuous white cross on the head behind this blotch is another interesting feature. It may be noticed that in the adults, the former practically disappears and the latter broadens out into a chocolate brown patch on the occiput. The dark rings (thrown into relief by a white outer border) in the adult enclose oval brown areas, but in the newly-born specimens, the rings are solid, black, oval or circular patches edged with white or may

<sup>1</sup> Fitz Simons gives the same period in the case of the puff adders of S. Africa. (*Vide* p. 222, South Afr : snakes). Major F. Wall gives the same period. (*Journ. Bombay Nat. Hist. Soc.*, Vol. XVIII)

<sup>2</sup> The occurrence of unfertilised eggs anterior in position to those in advanced state of development in the enlarged oviducts (Uteri) is not uncommon in the *Daboiæ*. Such a condition was noticed when a gravid female was dissected some-time ago.

<sup>3</sup> Specimens illustrative of all these facts have been sent to the Director Zoological Survey of India, Calcutta.